communication sequence, so as to determine to charge the mobile terminal in the quick charging mode.

[0091] A current adjusting circuit **620** is configured to adjust a charging current of the power adapter to the charging current corresponding to the quick charging mode to charge the mobile terminal.

[0092] In embodiments of the present disclosure, the power adapter does not increase the charging current blindly to implement quick charging, but negotiates with the mobile terminal via the bidirectional communication with the mobile terminal to determine whether or not the quick charging mode can be adopted. Comparing with the related art, the security of the quick charging process is improved.

[0093] Optionally, in an embodiment, the communication sequence includes instruction transmission time slots of the power adapter **600** and instruction reception time slots of the power adapter **600**, and the instruction transmission time slots and the instruction reception time slots are alternatively generated. The communication circuit **610** is configured to transmit a first instruction to the mobile terminal via the second data line during the instruction transmission time slot of the power adapter **600**, and the first instruction is used to query the mobile terminal for whether or not to activate the quick charging mode. The communication circuit **610** is further configured to receive a reply instruction corresponding to the first instruction via the second data line during the instruction reception time slot of the power adapter **600**, and the reply instruction corresponding to the first instruction is used for indicating that the mobile terminal agrees to activate the quick charging mode. The communication circuit **610** is further configured to determine to charge the mobile terminal in the quick charging mode according to the reply instruction corresponding to the first instruction.

[0094] Optionally, in an embodiment, the instruction transmission time slot of the power adapter **600** includes a number of clock periods, and each clock period is used for transmitting a 1-bit data.

[0095] Optionally, in an embodiment, the instruction transmission time slot of the power adapter **600** includes eight clock periods, and the first instruction includes a 8-bit data.

[0096] Optionally, in an embodiment, the instruction reception time slot of the power adapter **600** includes a number of clock periods, and each clock period is used for receiving a 1-bit data.

[0097] Optionally, in an embodiment, the instruction reception time slot of the power adapter **600** includes ten clock periods, and the reply instruction corresponding to the first instruction includes a 10-bit data.

[0098] Optionally, in an embodiment, the first instruction is an instruction of the quick charging communication instruction set of the power adapter **600**, and instructions of the quick charging communication instruction set have the same previous n bits.

[0099] Optionally, in an embodiment, each clock period of the clock signal includes a low level of 10 us and a high level of 500 us.

[0100] Optionally, in an embodiment, the first data line is a D+ data line of the USB interface, and the second data line is a D− data line of the USB interface.

[0101] FIG. **7** is a schematic block diagram of a mobile terminal in accordance with an embodiment of the present disclosure. A mobile terminal **700** in FIG. **7** is coupled to a power adapter via a USB interface. A power line of the USB interface is used for the power adapter to charge the mobile terminal **700**. The mobile terminal **700** supports a normal charging mode and a quick charging mode, and a charging current corresponding to the quick charging mode is greater than a charging current corresponding to the normal charging mode. The mobile terminal **700** includes the following.

[0102] A communication circuit **710** is configured to receive clock signal from the power adapter via a first data line of the USB interface in a process of that the mobile terminal **700** is coupled to the power adapter, and the clock signal is used to indicate a communication sequence between the mobile terminal **700** and the power adapter. The communication circuit **710** is further configured to conduct a bidirectional communication with the power adapter via a second data line of the USB interface under control of the communication sequence, so as to cause the power adapter to determine to charge the mobile terminal **700** in the quick charging mode.

[0103] A charging circuit **720** is configured to receive the charging current corresponding to the quick charging mode from the power adapter to charge a battery of the mobile terminal **700**.

[0104] In embodiments of the present disclosure, the power adapter does not increase the charging current blindly to implement quick charging, but negotiates with the mobile terminal via the bidirectional communication with the mobile terminal to determine whether or not the quick charging mode can be adopted. Comparing to the present technology, the security of the quick charging process is improved.

[0105] Optionally, in an embodiment, the communication sequence includes instruction reception time slots of the mobile terminal **700** and instruction transmission time slots of the mobile terminal **700**, and the instruction reception time slots and the instruction transmission time slots are alternatively generated. The communication circuit **710** is configured to receive a first instruction from the power adapter via the second data line during the instruction reception time slot of the mobile terminal **700**, and the first instruction is used to query the mobile terminal **700** for whether or not to activate the quick charging mode. The communication circuit **710** is further configured to transmit a reply instruction corresponding to the first instruction to the power adapter via the second data line during the instruction transmission time slot of the mobile terminal **700**, and the reply instruction corresponding to the first instruction is used for indicating that the mobile terminal **700** agrees to activate the quick charging mode.

[0106] Optionally, in an embodiment, the instruction reception time slot of the mobile terminal **700** includes a number of clock periods, and each clock period is used for receiving a 1-bit data.

[0107] Optionally, in an embodiment, the instruction reception time slot of the mobile terminal **700** includes eight clock periods, and the first instruction includes a 8-bit data.

[0108] Optionally, in an embodiment, the instruction transmission time slot of the mobile terminal **700** includes a number of clock periods, and each clock period is used for transmitting a 1-bit data.

[0109] Optionally, in an embodiment, the instruction transmission time slot of the mobile terminal **700** includes ten clock periods, and the reply instruction corresponding to the first instruction includes a 10-bit data.